

ABSTRACT

The present invention relates to an improved method and apparatus for echo cancellation in a communication system utilizing a bidirectional transmission medium. The invention significantly reduces computational overhead associated with echo cancellation by using sub-Nyquist sampling in the echo path. In particular, the invention relates to a method and apparatus for echo cancellation in a communication system utilizing different signaling or baud rates in the transmit and receive directions, whereby the computational overhead of the echo cancellation is significantly reduced as compared to traditional methods. In a preferred embodiment herein, the present invention reduces by one-half the computational overhead associated with echo cancellation in a data communications system utilizing symmetrical information rates at asymmetrical signal rates.